#### DOCUMENT RESUME

ED 277 662 SP 028 380

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TITLE Notes on the Redesign of Teacher Education. Teachers

for the Future: What Do We Want?

PUB DATE Nov 86

NOTE 13p.; Notes prepared for the Southeast Regional Forum

of the Education Commission of the States (Tampa, FL,

November 15-16, 1986).

PUB TYPE Reports - Descriptive (141) -- Speeches/Conference

Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.

DESCRIPTORS Educational Change; Higher Education; \*Preservice

Teacher Education; \*Program Design; \*Program Effectiveness; Teacher Characteristics; Teacher Education Curriculum; \*Teacher Education Programs;

Teacher Effectiveness

### ABSTRACT

These notes offer an overview of the elements that must be considered in designing an effective teacher education program. Each of the following is discussed: (1) the characteristics of an effective career teacher; (2) professional knowledge capabilities and skills often identified as topics that should be included in the teacher education curriculum; (3) research support (or lack of it) for some commonly heard assertions relating to teacher education; (4) four alternative base models for a teacher education program; (5) generally accepted propositions relating to the development of effective teacher education programs; 6) relative strengths of the alternative models of a teacher education program (table); (7) evaluating the strengths and weaknesses of alternative programs; and (8) obstacles to the reform of teacher education. (JD)



# NOTES ON THE REDESIGN OF TEACHER EDUCATION

Prepared for the Southeast Regional Forum of the Education Commission of the States

Teachers for the Future: What do We Want?

November 15, 16, 1986

Tampa, Florida

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## OUTCOMES OF EFFECTIVE TEACHER PREPARATION

In order to design a program of teacher education, one needs to decide what types of teachers one wants. This decision, in turn, will be shaped by what one believes really good teaching entails. Recent research suggests that effective teachers possess an array of instructional strategies from which they are able to select appropriate ways of facilitating student learning based on an analysis of their students' learning needs and capabilities. There appears to be growing agreement among observers of teaching that is is useful to picture teachers as reflective problem solvers who manage a complex production process in which students may be thought of as workers whose job it is to produce learning using a technology that is comprised of the curriculum, instructional methods, and other learning resources. The more the student-workers differ in their ability and motivation, the more demanding the job of teaching becomes.

This conception of effective teaching would lead one to design a teacher preparation program which "produces" career teachers who are:

- o intellectually able (as measured by academic performance and aptitude)
- o well-educated in the sense that they have an extensive exposure to the humanities and the natural and social sciences
- o knowledgeable about the subjects to be taught
- o aware of how children learn
- o capable of employing a repertoire of strategies for facilitating learning
- o committed to teaching and unlikely to leave the profession
- o empathetic and responsive to individual and group differences among students
- o able to adapt their behavior in response to the systematic analysis of complex problems
- o effective in interpersonal communication
- o aware of how schools can be made more effective organizations



PROESSIONAL KNOWLEDGE, CAPABILITIES AND SKILLS OFTEN
IDENTIFIED AS TOPICS THAT SHOULD BE INCLUDED IN THE
TEACHER EDUCATION CURRICULUM

Classroom Management

Reading

Student Social and Emotional Development

Student Learning- "Normal Children"

Student Learning- "Exceptional Children"

Observational Skills

Analytical/Problem Solving Skills

How to be Reflective

Generic Instructional Strategies

Subject-specific Instructional Strategies

Philosophy of Education

History of Education

Knowledge of Schools as Organizations

Curriculum Design

Student Evaluation (including but not limited to testing and measurement)

Use of Educational Technology

Collaboration with Other Teachers

Relations with Parents

Effective Communication



# The Research Support for Commonly Heard Assertions Relating to Teacher Education

Advocates of various proposals for reforming teacher education frequently base their case on assumptions they assume to be true without questioning whether the evidence supporting the assumption is adequate to the weight the assumption bears in the argument they make. Many assertions made by would-be reformers of teacher education are better characterized as values than as facts. Values, of course, are legitimate bases for action but they should be labelled accordingly.

Assertion I - Knowing the subject one is to teach in depth will make one a better teacher. Depending on what one means by depth, there is little evidence to support this assertion. Teacher grade point average or number of courses taken in the subject taught do not appear to correlate with student performance on standardized tests -- except in advanced high school classes.

Assertion II - Adding an additional year to preservice teacher education will increase the quality of those pursuing a teaching career. Sketchy evidence and inferences drawn from labor economics suggest that the opposite of this assertion is correct. One may think of a labor market at being in equilibrium with respect to the response of that market to the rewards of a given occupation. If the costs of entry are increased, so must the benefits be increased or the size and quality of the candidate pool will decline. Alternatively, the distribution of potential teachers' motives can change and this happens in response to changes in the value attributed to a role by the society or because some other cultural change. Changes in the entry costs of particular programs that are accompanied by increased intrinsic rewards may alter the number of students interested in such programs but it is unlikely to affect the overall distribution of motives or the perceived benefits of serving in the profession.

Assertion III - Requiring that new teachers have a master's degree before teaching will increase the status of the teaching profession. There is no evidence to support this claim. Education attained by members of a profession appears to be only loosely correlated with occupational status (measured by attraction of the occupation, deference given to the occupation and earnings).

Assertion IV - Teacher education is a waste of time; teaching is an art that can be learned on the job. Research on teaching shows that certain teacher behaviors are consistently related to student achievement. Specific programs aimed at teaching particular behaviors (e.g., asking higher order questions) have been shown to be effective in the short run. Students who graduate from teacher education programs are usually more effective teachers than college graduates who have had little or no formal exposure to a preservice preparation program.



on V - The more prospective teachers learn about teaching (e.g., the pre purses they take) before they begin to teach, the more effective they e. While students who complete conventional teacher preparation ams are usually more effective teachers than those who do not, the purses of different types of preservice programs has not been studied. The purse the first and second years of teaching, teachers abandon some of their fills that are effective in order to simplify their tasks, conform to chool norms, and ensure that they can control their classrooms.

Assertion VI - Increasing the amount of preservice practice in schools that a teacher candidate has will increase their teaching effectiveness. Teachers generally report that practice teaching was valuable. But, studies of practice teaching suggests that students seldom learn much they did not already know and often narrow rather than expand their repertoire of strategies.

Assertion VII - More study in the liberal arts will make one a better teacher. This issue has not been studied. Studies of the changes in student attitudes, ability to reason, resulting from variations in their college experience are few in number and inconclusive. Small liberal arts colleges do seem to influence student values in ways consistent with the culture of the particular college.

Assertion VIII - The smarter you are the better teacher you will be. This intuitively sensible assertion cannot be documented clearly. Within the range of the intellectual abilities of teachers candidates who are hired or who complete their programs (many do not), there appears to be little relationship between teacher effectiveness and scores on the National Teachers Exam, scores on the Scholastic Aptitude Test and American College Test, or grade point average in college. Some tests of teachers' verbal ability have been found to correlate very modestly with student achievement and high teacher evaluations.

### References

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## Alternative Base Models for Teacher Education

Let me identify four general approaches to teacher education that are: (a) the four year model (at its best) now experienced by most current teacher candidates (b) college or university based five-year programs that link under graduate and graduate preservice preparation (I will call these "extended" programs), (c) postbaccalaureate "fifth year" programs, and (d) a hybrid program that uses undergraduate years, an in-school clinical year, and the later return to graduate study, which I will call the "development model."\* Only the last of these models provides for a way of facilitating the student teacher's transition from college to the independent responsibility for classroom teaching but a transition mechanism could be added to each, ranging from a full-time clinical internship or residency (as advocated by the Holmes Group), as an essential component of effective teacher preparation to a more modest follow-up induction program (such as the induction programs in Oklahoma and Kentucky).

Each of these models have many variations, but their basic elements are generic enough that we can deal with a number of issues relating to teacher education reform by focusing on these approaches. It may be useful, however, to distinguish two types of fifth year programs: those that are based primarily in colleges and universities and those that are primarily field-based. The first of these is the conventional postbaccalaureate program found in most universities. Field-based models are much less common. The best known probably is the program at Bank Street College, and the proposal made by the Carnegie Forum is essentially field-based.

<sup>\*</sup> Since the "developmental model" is my own configuration, it may need a brief elaboration. The idea is that students would pursue a pre-professional education program of about 10 courses at the undergraduate level. courses would seek to link, as much as possible, to the liberal arts curriculum. Practice oriented courses, such as subject matter methods and classrcom management and "practice teaching", would be moved to a fifth-year residency in selected schools that serve a diverse student body and double # teacher training sites. Such schools would be the counter-part of teaching hospitals. Some graduate credits would be accumulated during the residency year. After three years or more of favorably evaluated teaching, teachers would become eligible for a one-semester sabbatical. Given even half of the attrition rate now experienced by the average school systems, the cost of such arrangements would not be significantly more than other models involving extensive postbaccalaureate study (e.g., the Holmes model). To ensure that teachers' commitment meet the public investment in their further professional development, such study could be financed by forgivable loans. This model, among other ends, seeks to diminish the amount of part-time graduate study by beginning teachers because such study is inefficient and relatively ineffective. It is also hard on the teachers and their students.

## Propositions Relating to the Development of Effective Teacher Education Programs

The propositions listed below seem to be accepted as basically correct by most observers of teacher education and teacher learning. On the other hand, the implications of the propositions are often hotly debated. Table 1 compares the extent to which various models for teacher preparation accommodate these propositions. Of course, other analysts may come to different conclusions. Each of the models examined has its relative advantages and disadvantages.

Most of the propositions identified have consequences for structure, curriculum content and instructional strategies. The last three propositions relate primarily to instruction and, because each model can incorporate the strategies implied by these propositions, they are not included in Table 1.

## Propositions

- a. Minimizing costs of entry—in terms of reducing economic costs and eliminating required courses not seen as relevant or interesting by prospective teachers—will increase both the academic quality and the size of the pool of potential teachers. Courses seen as undemanding seem to discourage good students from enrolling in teacher education.
- b. Prospective teachers should take at least half of their course work in the liberal arts and undertake in-depth study in a discipline or a multidisciplinary concentration taught primarily outside of the "professional education" curriculum.
- c. The transfer by teachers of knowledge and capabilities gained through the study of the liberal arts and disciplinary or multidisciplinary subject matter to the students they teach is very problematic, particularly when these subjects are taught to prospective teachers without concern for such transfer. Thus, it is important to link, as directly as possible, liberal arts and disciplinary subjects to the theory and practices related to teaching.
- d. The body of knowledge about effective teaching has increased significantly in recent years. (The inference drawn from this fact is, of course, that the amount of preservice time needed to learn about teaching should be increased).
- e. Teachers are better able to learn about teaching once they have taught because they see the material as more meaningful and have greater cognitive capacity to organize and retain the information they receive.
- f. Coursework in education is often seen as lacking in academic sophistication and rigor in part because much of it is focused on the development of practical skills and in part because it often does not engage general social and behavioral theories and methods of systematic analysis.



- g. Clinical skills are best learned in clinical settings.
- h. Teachers who are more confident of their ability to facilitate student teaching are more likely to stay in teaching than teachers who lack such confidence.
- i. Most teachers learn more from their initial working conditions and from their fellow-teachers than they do from their college or university based education. Typically, these on-the-job lessons both straightener and weaken the new teacher's potential effectiveness.
- j. Most teachers find the first year of teaching to be very difficult and they cope with the complexity and uncertainty they confront by focusion on control strategies, routinization, and the abandonment of one of the knowledge and capabilities they had when they entered teaching.
- k. Opportunities for continuing professional development are an important source of teacher effectiveness and of motivation to remain in the profession.
- l. The validity of student-teachers' scores on standardized tests as measures of potential teacher effectiveness is very weak while direct assessments of teaching performance are relatively good predictors of teacher effectiveness.
- m. It is desirable to minimize the costs of teacher education reform because such costs may not be funded adequately and, if funded may reduce the resources available for other educational improvements.
- n. The body of knowledge we now have about teaching and learning all both expand and change in a relatively short period of time. One of the implications of this is that prospective teachers should have the capacity to learn on their own.
- o. Few teaching strategies work equally well for all learning objetives or for all types of students. Thus, teachers need to have street problem solving skills and the capacity to use theory in adapting the ir teaching practices.
- p. People learn from models of curriculum and instruction that the believe to be legitimate.
- q. Advances in the application of technology to teacher education will dramatically decrease the time it takes students to learn about teaching strategies.



RELATIVE STRENGTHS OF ALTERNATIVE MODELS OF TEACHER EDUCATION

PROPOSITIONS	Under- grad	Develop- mentai	Extended	Extended & Residency	Fifth Yr. Field	Fifth Yr. Collage	Fifth Yr. & Residency	Develop- mental 8 Grad Sch
a. Low Entry Costs (Impact on pool)	1	2	4	6	3	3	7°	2
b. Liberal Arts & Disciplinary Studies	3	2	2	2	1	1	1	2
c. Link Lib. Arts, Disciplines to E <sup>2</sup> .	3	2	4	1	4	4	4	2
d. Accommodate Ed. Knowledge	4	3	2	1	5	5	3	3
e. Experience & Learning Efficiency	5	2	4	2	3	4	2	1
f. Rigor of Ed. Curriculum	2	1	1	1	1	1	1	1
g. Clinical Settings	4	2	4	2	3	5	1*	2
Teacher Candidate Sense of Efficacy	5	2	4	1	3	4	2	2
• Impact of Workplace	5.	3	5	3	4	5	2	1
<ul> <li>First Year</li> <li>Difficulties</li> </ul>	4	2	4	2	3	4	1*	2
• Continuing Profes- sional Development	6	4	6	3	5	6	2	1
<ul> <li>Assess Potential</li> <li>Effectiveness</li> </ul>	3	1	3	1	2	3	1	1
• Low Need for More Funding	1	*	4	5	3	4	5	5
Accommodate to Change in Ed. Know- ledge	4	2	4	2	3	4	2	1

Note: "=if fifth year is field-based

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## Using Table 1 to Make Policy

If one were to add up the columns in Table 1 A and rank the models in terms of their (low) score on the assessment done, one would find conclude that the Development Model with the Return to Graduate Schacol is the superior model followed closely by the Developmental Model and other models that provide for a residency. The Field-based Fifth Year Model ranks in the middle and the others have considerably higher (worse) scores.

Despite its attractions (particularly if your t favorite models rank highly—as mine do), this simple strategy for decision makering would be inadequate for several reasons:

- o The effects of the models will depend on how well they are implemented (I have assumed best-case scendairios)
- o The weights one would give to the importance of the considerations embodied in each proposition will vary. For example, there are enormous differences in the costs of improvering undergraduate models as compared to fully implementing the Five Y Year plus residency (i.e., Holmes) model. How one would weight these costs depends on one's assessment of the availability of resources and the impact on children's learning of teacher education reform as compared to other strategies for school improvement).
- o The specific character of variations within these "base models"-especially with respect to the quality of ottudents and faculty,
  the content of curriculum and the nature of cooperating school
  systems-- may be more consequential than dilleferences among them.
- o The list of propositions considered may be incomplete.

These reasons why a score card approach to deci Hision making should not be used do, however, suggest ways that this general states or an be adapted to the consideration of alternative policies in particular = states or institutions of higher education. There are many factors to consider in designing improvements in teacher education. Decision-making aids like Talable 1 may help organize and make more explicit the informal process of weighing alternatives and making trade-offs that invariably goes on when policy is fanade.



## Assessing the relative Strengths of the Models

The <u>relative</u> efficacy of the different models viz-a-viz each proposition is indicated by rankings on a simple scale of 1-8 with those ranked 1 bein-g the model with the greatest potential for accommodating the implications of that proposition. When the residency option for some models does not affect a particular proposition, that option is given the same ranking as the base model. Simple ordinal ranking, of course, may mask big differences in probably effects.

In assessing financial costs, I am assuming that about half of the costs to individuals of fifth-year and residency programs will be publicly subsicilized. to assume subsidies at all may be bullish. To neglect subsidies is to invite a major crisis in the supply of academically able teacher candidates.

OBSTACLES TO THE REFORM OF TEACHER EDUCATION

- 1. LACK OF AGREEMENT ABOUT ESSENTIAL AND RELIABLE
  PROFESSIONAL KNOWLEDGE, CAPABILITIES AND SKILLS.
- 2. THE ABSENCE OF A THEORY, OR GROUNDED THEORIES, OF TEACHER LEARNING.
- 3. THE POPULAR CONCEPTION THAT GOOD TEACHING INVOLVES

  NO SPECIAL TECHNICAL OR SCIENTIFIC SKILLS THAT CANNOT

  READILY BE LEARNED BY ALMOST ANYONE.
- 4. THE ABSENCE OF VALID OUTCOME MEASURES OF TEACHER EDUCATION THAT PREDICT EFFECTIVE TEACHING.
- 5. THE FRAGMENTATION OF THE TYPICAL UNDERGRADUATE EDUCATION AND THE DISCONTINUITY BETWEEN UNDER-GRADUATE AND GRADUATE EDUCATION.
- 6. THE RELATIVELY NARROW EDUCATIONAL AND SCHOLARLY PREPARATION OF MANY TEACHER EDUCATORS.
- 7. THE ABSENCE AMONG UNIVERSITY AND COLLEGE PROFESSORS
  OF AN UNDERSTANDING OF TEACHING AND LEARNING.
- 8. THE LIMITED COMMITMENT MOST ARTS AND SCIENCE PROFESSORS HAVE TO TEACHER EDUCATION.
- 9. THE RELATIVE UNATTRACTIVENESS OF TEACHING AS A CAREER, BOTH BEFORE AND AFTER ENTRY.

